

Voyageurs

National Park Service
U.S. Department of the Interior

Voyageurs National Park
Minnesota



Fiscal Year 2017 Accomplishments and Statistics

The following is a compilation of work that was accomplished at Voyageurs National Park during fiscal year 2017. This in no way captures all the work that was completed, but rather a snapshot of some of the highlights that occurred. Goals to which the document reports to were developed through a collaborative strategic planning effort that the park undertook in 2017, with cooperation from our not-for-profit partner Voyageurs National Park Association, and included input from park team members, partners and members of the public. The document also includes an analysis of various measures from 2013 through 2017. Many of these parameters aid in developing an understanding of park details and issues.

Goal 1: Resource Protection

Protect the natural, scenic, cultural, historic, and wilderness resources of Voyageurs National Park and foster public stewardship of park resources.

International Joint Commission (IJC) Collaboration – park resource management staff provided support to the Technical Working Group and the IJC Rule Curve Review Study Board to help wrap up the review of the 2000 Rule Curves, which has significant benefits for natural and cultural resources in Voyageurs.

Invasive Cattail Management – secured nearly \$800,000 in external funds for restoration of non-native cattail-dominated wetlands in Rainy Lake. Implemented a monitoring protocol that resulted in pre-treatment data on plants, birds, aquatic invertebrates, and aquatic mammals. The Bois Forte Band of Ojibwe began mechanical removal of cattails at the Rainy Lake Visitor Center in October, 2017. Removal of cattails will resume in spring 2018.

Study and Education Related to Algal Blooms – Worked with MPCA, Minnesota Department of Health, and MN DNR regarding cyanobacterial toxins to produce a fact sheet and press release after park management received numerous inquiries about blooms during fall 2016. Completed final season of data collection for the USGS-NPS study of drivers of cyanotoxins.

The park undertakes inventory and monitoring activities of natural resources to better understand their nature and status. This information is utilized to understand potential impacts of actions that are considered in park planning, management and decision making. The monitoring also aids in identifying change in the conditions within the park.

Contaminant Monitoring – Participated in national studies of mercury in dragonflies and chemicals of emerging concern in lakes.

Continuing Research – continued wildlife management and applied research program that includes several long-term monitoring programs and several large research projects (research papers published and pending):

- Population Status of Moose in Voyageurs
- Investigations of the Effects of Climate Change on Moose in VOYA Area
- Population Status of Gray Wolves in Voyageurs
- Effects of Harvest Season on Gray Wolves in Voyageurs
- The Ecology of Beavers in Lake Environments
- Top-down Effects of Bald Eagles on Avian Prey Species in the Southern Boreal Forest Region
- Habitat Use Patterns of American Martens at Isle Royale and Voyageurs
- Climate Change Adaptation Planning for Northern Forest Parks

On-going Monitoring – completed annual monitoring of air and water quality, common loons, forest breeding birds, bald eagles, American beavers, bats, archeological sites, cultural landscapes and historic structures.

Administrative History – published “Building a Park for All: A History of Voyageurs National Park, Minnesota” written by Dr. Joan Zenzen. The report can be found at - <http://npshistory.com/publications/voya/adhi.pdf>

Assisted Koochiching Museums – cooperated in developing several projects, including historic photograph displays, as part of a collaborative Preserving and Sharing History project.

Kettle Falls – revised and implemented the Kettle Falls Historic Furnishings Plan to improve visitor experience and protection of significant furnishings.

- Completed 3-year archeological investigation at Kettle Falls (report pending)
- In cooperation with Voyageurs National Park Association, began work related to improving trails and overlook at Kettle Falls Dam

Other Historic Structure Work

- Rehabilitation of Garrett and Mittet historic structures
- Prep and painted exterior structures at Casareto destination site
- Started replacing roofing and painting exterior buildings at Hoist Bay destination site

Goal 2: Signature Park Experiences

Provide a range of visitor experiences and recreational opportunities to a diversity of audiences that connect people to the park and convey the importance of protecting the resources, values, and wilderness character of Voyageurs National Park.

Safety - park team members assisted with the rescue of two visitors that broke through the ice during the late winter of the year, several local area EMS needs, and responded to a visitor incident resulting in a fatality.

- Several of the park staff are integral to the EMS/Fire response through volunteer organizations, a commitment that park management supports and will continue to foster to the greatest extent possible.

Provide Interpretation and Education Opportunities – statistics related to opportunities are provided later in this document.

- A full set of interpretive programs were provided in several areas of the park. A boat tour was available every day from either the Rainy Lake or Kabetogama Visitor Center from mid-June through August 30. Fall tours were offered through mid-October.
- The Winter Speaker Series at the Rainy Lake Visitor Center was offered for first time in 3 years – More than 400 people attended programs.
- Offered Sky program (Eclipse Viewing) for first time in 7 years – over 100 people attended.
- Started development of a recreation.gov video for camping in park
- Completed development and implementation of waysides related to the following Visitor Destinations: Anderson Bay Visitor Destination, Phase one of Ellsworth Rock Gardens (5 waysides)

Maintain current infrastructure and visitor facilities – Throughout the year, using fee revenue and other available project funds the park team completed a sweet of projects to assure that facilities are maintained in good condition. Projects included:

- Completion of road re-surfacing at Rainy Lake and Ash River Visitor Center access roads
- Replace roofing on Kettle Falls Villas and employee housing
- Installed air conditioning at the Kettle Falls Hotel
- Began replacement of dock system at Kabetogama Harbor, work to continue in 2018
- Completed trail projects at use sites along the Meadwood Road
- Rehabilitated 25 campsites throughout the Namakan district by replacing tent pads, bear proof food lockers, fire rings, picnic tables and privy tanks and risers
- Completed work on the Cruiser Lake Hiking trail
- Completed Dock rehabilitation project on 4 trailhead docks
- Completed backcountry campsite rehabilitation on 4 interior lakes campsites in the chain of lakes
- Installed new windows at Rainy Lake Visitor Center
- Remodeled employee housing cabin in Whispering Pines area

New infrastructure

- Constructed four new campsite docks on Rainy Lake
- Worked closely with county to further the Island View sewer project to allow connection to Rainy Lake VC facilities
- Worked with VNPA, using grant funds garnered from REI, to begin implementation of a paddle craft launch at Rainy Lake VC area
- Worked with Crane Lake on beginning process of potential for new trail in Mukooda area, realign Mukooda campground and consider new visitor center in area.

Goal 3: Public Engagement and Outreach

Strengthen public support and long-term stewardship through education, outreach, and partnerships that increase the public's understanding and appreciation of Voyageurs National Park and the National Park Service.

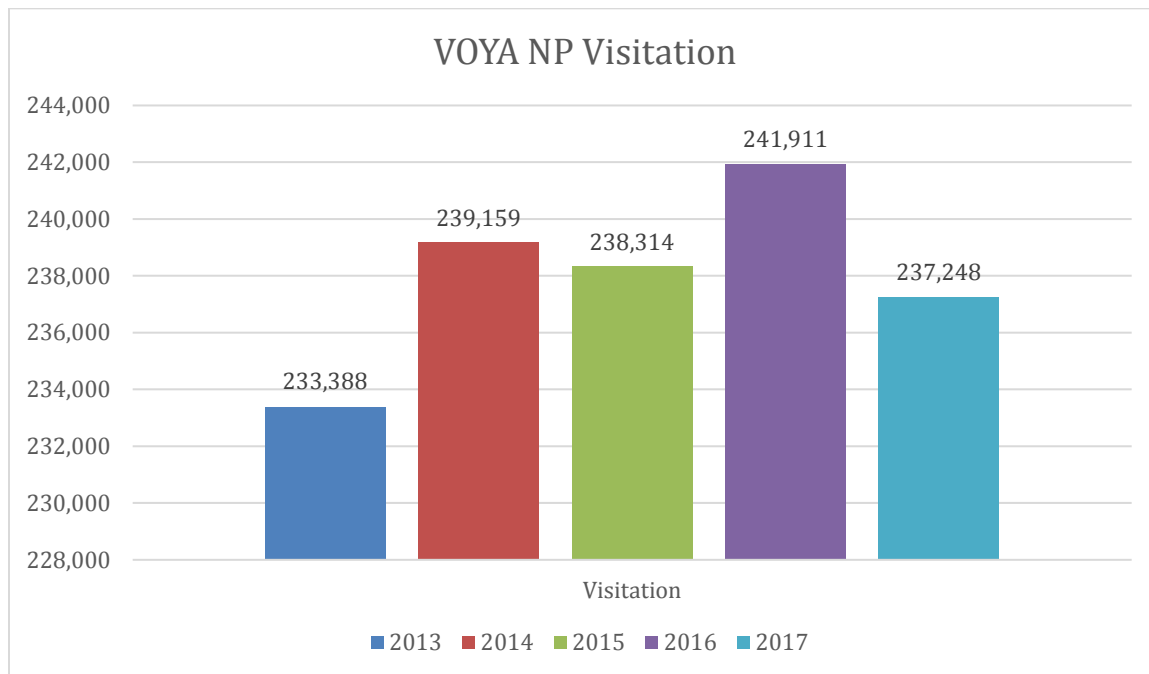
- Park staff provided youth opportunities to a range of diverse audiences through curriculum based education programs
- Worked closely with 20 students from the Minnesota and Iowa Conservation Corps on Kab-Ash Trail maintenance projects
- Facilitated, along with Voyageurs National Park Association, the on-going *Teen Ambassador Program* where students from the Minneapolis/St. Paul urban area are provided an overnight camping/canoeing opportunity at Voyageurs National Park and rural students from the Voyageurs area are provided a similar opportunity at Mississippi National River and Recreation Area in the cities.
- Completed 3 lesson plans for Great Lake Regional 7 parks --Travel Truck on Aquatics Invasive
- Started creation of new Junior Ranger book for VOYA
- Park staff worked closely with Vermillion Community College and students in the institutions seasonal ranger academy, providing students with MOCC training and advisory assistance to program. Additionally, staff advised graduate and undergraduate students on applied research at Voyageurs
- Continued involvement with community events

Goal 4: Maintain Leadership and Organizational Integrity

Foster strong leadership to support the mission, goals, and objectives of Voyageurs National Park and the National Park Service.

- Working with the Voyageurs National Park Association the park facilitated a dialogue opportunity with staff, partners and interested constituents to develop a strategic plan that will prioritize VOYA NP's objectives for the next 3 to 5 years
- Began development of an annual report and meeting to aide in informing the public about park work
- Continued to support park staff taking part in national hurricane and fire response
- Implemented houseboats permit reservation system as part of the recreational fee program

2013 through 2017 Statistical Analysis



Visitation

2017 237,248
2016 241,911
2015 238,314
2014 239,159
2013 233,388

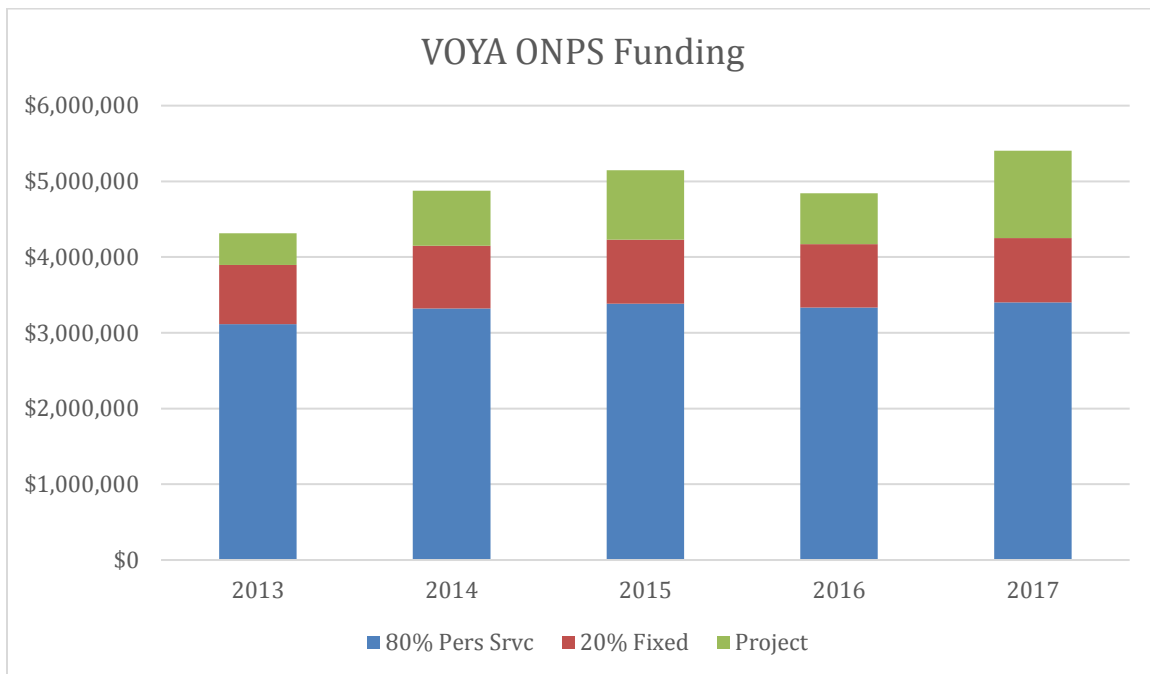
2017 Economic Benefit Numbers

The 2017 NPS report shows that 237,249 visitors to Voyageurs National Park in 2017 spent over \$18 million¹ in communities near the park². That spending supported 273 jobs in the local area.

The complete NPS report can be found at - <http://www.nature.nps.gov/socialscience/economics.cfm>

¹ An average of \$76 per visitor.

² Communities are those within a 60 mile radius of the park.

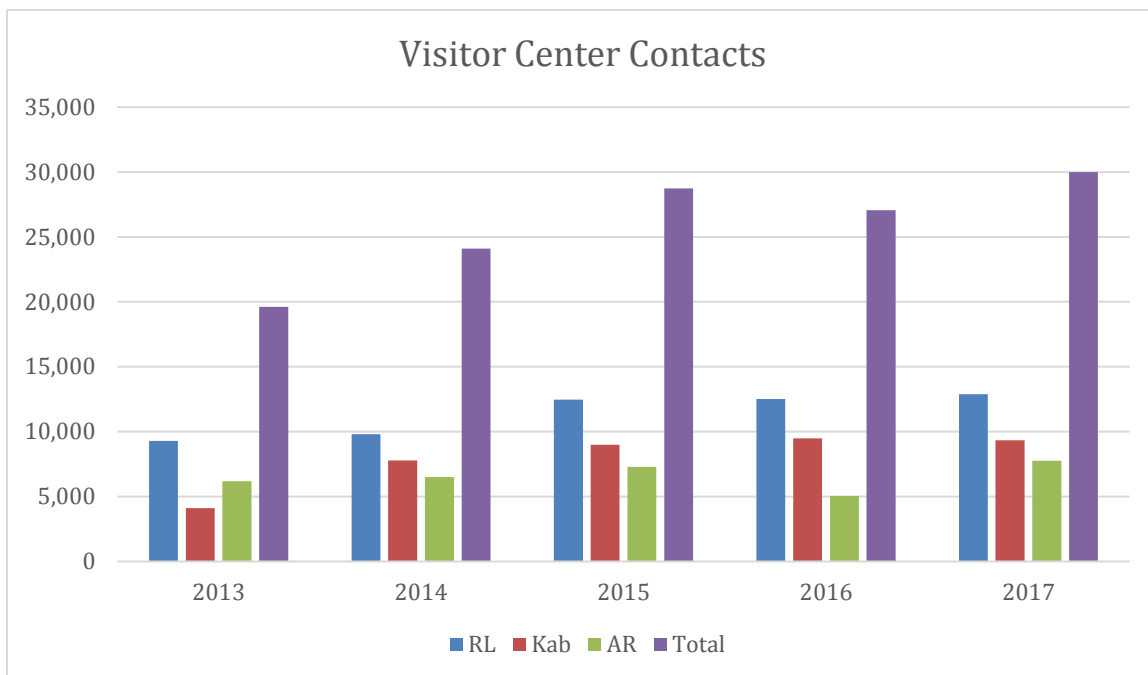


ONPS Funding					
Year	80% Pers	20% Fixed	ONPS Base Total	ONPS Project*	ONPS w/Project
2017	\$3,402,089	\$850,523	\$4,252,612	\$1,153,037	\$5,405,649
2016	\$3,335,638	\$833,910	\$4,169,548	\$671,291	\$4,840,839
2015	\$3,385,404	\$846,351	\$4,231,755	\$916,816	\$5,148,571
2014	\$3,320,770	\$829,922	\$4,150,692	\$725,631	\$4,876,323
2013	\$3,115,792	\$778,948	\$3,894,740	\$418,977	\$4,313,717

* This is not the only funding source available to the park for projects. Total project expenditures come from ONPS, Fee Revenue and other NPS programs.

2017 Project Expenditures		
Project Title	Expenditures	Accomplishments
Improve Visitor Safety at Rainy Lake West Campsites	\$ 48,596	Rehabilitation of seven sub-standard campsites located on Rainy Lake.
Replace Roofing on Kettle Falls Villa Housing Units	\$ 175,776	Replaced cedar shakes with metal shakes
Repair Boardwalks and Tread Surface to Improve Visitor Safety—Cruiser Lake Trail	\$ 149,046	Replaced 260 feet of rotted boardwalks and steps. Improved tread surface by brushing and limbing on 9 miles of trail. Replace 31 directional signs. Removed encroaching vegetation by cutting brush, trees, and overhanging stems.
Rehab Trailhead Docks	\$ 178,065	6 Trailhead docks rehabilitated back to good condition
Provide accessible pathway to ARVC picnic	\$ 54,508	Materials purchased work to commence in 2018.
Replace Roofing and Repair Exterior Wood Siding at Hoist Bay Structures	\$ 74,359	New roofing was put on along with painting the exterior
Prep and Paint Exterior Siding at Casareto	\$ 14,895	Prep and painted log exterior of Casaretos cabin, also made repairs to logs
Upgrade Heating Boiler at Ash River Operations Building	\$ 12,047	New boiler purchased and installed

Upgrade HVAC at Kettle Falls Hotel to Improve Efficiency and Visitor Experience	\$ 56,165	Project completed with cooling/heating units installed in dining, lobby and bar areas
Replace Windows at RLVC with UV Protection Windows	\$ 79,438	Project completed on schedule with 32 windows replaced
Connect Rainy Lake Wastewater Facility to Central Sewer Collection System	\$ 197,764	This project is part of a much larger sewage collection project for the east Koochiching sewer district.
Stabilize Historic Mittet and Garrett Cabins	\$ 162,886	
Rehab Meadwood Hiking Trails	\$ 51,580	
Rehab Kab VC	\$ 67,429	Project started in FY2017.
FY2017 Campground Maintenance	\$ 67,768	
Rehabilitate Namakan Lake Campsites	\$ 32,125	This project replaced 16 rotted tent pads, installed 4 new food lockers, replaced 4 picnic tables, Repaired 6 privy tanks and risers, and installed 5 new shoreline erosion logs, Replaced 15 fire rings, replaced 10 symbol signs, constructed 3 new core pads at campsites, painted 10 food lockers and improved access at 22 campsites.
Rehab Rainy East Sites	\$ 66,637	
FY2017 National Reservation Recreation	\$ 104,080	This is a recurring project that funds the management of the park's reservation system.
Replace Existing Map Display Board	\$ 873	This project replaced the park wall map at three locations in Voyageurs. The FY2017 expenditure reflects labor to mount maps.
PLC-Perform Brushing and Tread Repair	\$ 34,441	Utilized 10 person youth crew to remove encroaching vegetation and repair tread surface of the Kab-Ash trail by brushing 6 miles of trail, clearing and repairing 12 waterbars, cleaning and repairing 5 culverts, repairing 3 rock stairways and installing new signage.



Visitor Center Contacts				
Year	RL	Kab	AR	Total
2017	12,883	9,344	7,765	29,992
2016	12,528	9,495	5,041	27,064
2015	12,457	8,986	7,283	28,726
2014	9,800	7,789	6,506	24,095
2013	9,298	4,120	6,193	19,611

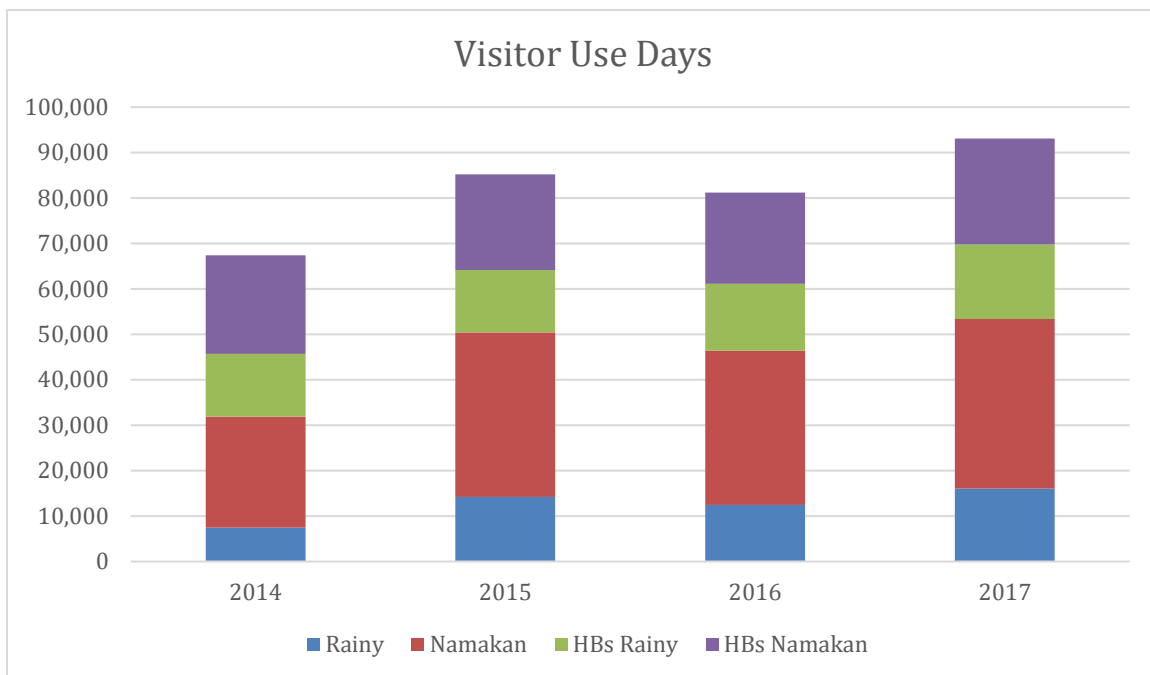
Interpretive Program Participation				
Year	# of Programs	# of Participants	# Ed Programs	# Ed Participant
2017	203*	3,903	51	1396
2016	305	6,832	76	1860
2015	352	5,026	32	923
2014	362	3,684	45	1333
2013	231	2,664	59	1969

* 2017 season was shortened due to challenges with hiring seasonals.

Teen Ambassador Program

This program is a cooperative opportunity made possible through support from the Voyageurs National Park Association and Wilderness Inquiry II. The program brings urban youth from the Twin Cities area and rural youth from park gateway communities together for outdoor opportunities at Voyageurs National Park and Mississippi

From 2012 through 2017 a total of 5 programs were provided to 133 students. The average program accommodates 26 students annually. Through the duration of the program 17 students from park gateway communities have participated. Space is still available for 2018 programs. Interested students can get information at – www.voyageurs.org/teenambassadors



Visitor Use Days* / Campsites				
Year	Rainy	Namakan	Total	#Permits
2017	16,047	37,361	53,408	3,353
2016	12,457	33,952	46,409	3,276
2015	14,250	36,186	50,436	2,987
2014	7,473	24,414	31,887	N/A
2013	No Data			

Visitor Use Days* / Houseboats				
Year	Rainy	Namakan	Total	#Permits
2017	16,347	23,343	39,690	1587
2016	14,701	20,071	34,772	N/A
2015	13,697	21,091	34,788	N/A
2014	13,821	21,709	35,530	N/A
2013	No Data			

* Visitor use days are calculated by taking the number of campers on permit x the number of days in park. Example: 1 permit identifies 4 people camping for 5 days – 4 people x 5 days = 20 Visitor Use Days.

Camping / Houseboat Revenue			
Year	Camping	Houseboats	Total
2017	\$262,626	\$71,210	\$333,836
2016	\$249,439	N/A	\$249,439
2015	\$216,881	N/A	\$216,881

Cost of Collection / Maintenance Project Expenses			
Year	CoC Expense	Project Expenditures	Total
2017	\$104,080	\$294,286	\$398,366
2016	\$90,388	\$213,278	\$303,666
2015	\$85,936	\$139,070	\$139,070

Boat Tour Revenue

2017	\$77,025
2016	\$77,930
2015	\$63,197

Permittee Locations

Not surprisingly most people getting permits and making boat tour reservations are primarily from Minnesota and Wisconsin. For the last three years of collecting permit information some of the other top states include:

2017 – MN 2651; WI 195; IL 82; IA 78; CO 29; OH 26; MI 26

2016 – MN 2643; WI 195; IA 67; IL 65; ND 47; CO and CA 22 each

2015 – MN 2413; WI 174; IL 71; IA 54; ND 42; IN 23; CO 20; MI 19

Park Charters						
Year	Rainy Lake		Namakan Basin		Revenue	Expenses
	#Charters	#Passengers	#Charters	#Passengers		
2017	12	327	2	36	\$6,471	\$6,380
2016	12	370	1	20	\$4,583	\$4,983
2015 ¹	7	205	3	42	\$2,381	\$6,257
2014	14	431	2	27	\$6,653	\$6,606
2013 ²	15	466	3	54	\$3,940	\$9,722

¹ Charters on the Namakan Basin were park related with outside groups and no fees were charged. Many requested trips were canceled due to flood conditions.

² Due to a new accounting system total revenue related to program was reflected in different accounts.

Kettle Falls Overnight Stays

2017	3,822
2016	3,983
2015	3,233
2014	3,264
2013	3,617

Deferred Maintenance ¹			
Year	No. of Assets	FCI ²	DM
2017	471	.129	\$14,875,388 ³
2016	471	.154	\$17,341,696
2015	470	.141	\$15,965,764
2014	466	.119	\$12,951,565
2013	No Data		

¹ Deferred maintenance (DM) refers to work that has not been accomplished when it was due.

² Each asset at a park receives a facility condition index (FCI) rating. A FCI of .101 to .150 is considered fair condition. FCI < .101 is good condition, > .150 is poor condition. This FCI reflects the average of all assets in the park.

³ In 2018 VOYA NP should reflect a large reduction in DM due to completion of roadwork accomplished in 2017.

VOYA NP Staffing 2018								
Division	PFT	STF	Term 4 yr	Temp 1 yr	Seasonal	Total	Shared	VIPs/ Interns
Supt	1	1 ¹				2		
Admin	2	2 ¹				4		
Interp	3	1			18 ²	22		9
Res Mngt	7	1	1 ³		14	23	1	6
Maint	9 ⁴	4	6		17	36		
VRP	5 ⁵				4	9		
VRP Support		1				1		
Fire	3				1	4	1	
Total	30	10	7		54	101		

VOYA NP Staffing 2013						
Division	PFT	STF	Term 4 yr	Temp 1 yr	Seasonal ⁶	Total
Supt	2					2
Admin	2	2				4
Interp	3				32	35
Res Mngt	7	2	1		13	23
Maint	11	7			36	54
VRP	7					7
VRP Support	1				8	9
Fire	4	1			7	12
Total	37	12	1		96 ⁶	146

¹ During FY 18 the superintendent assistant position moved to property manager in Administrative Division.

² Not all of these positions are full time seasonals, several are intermittent.

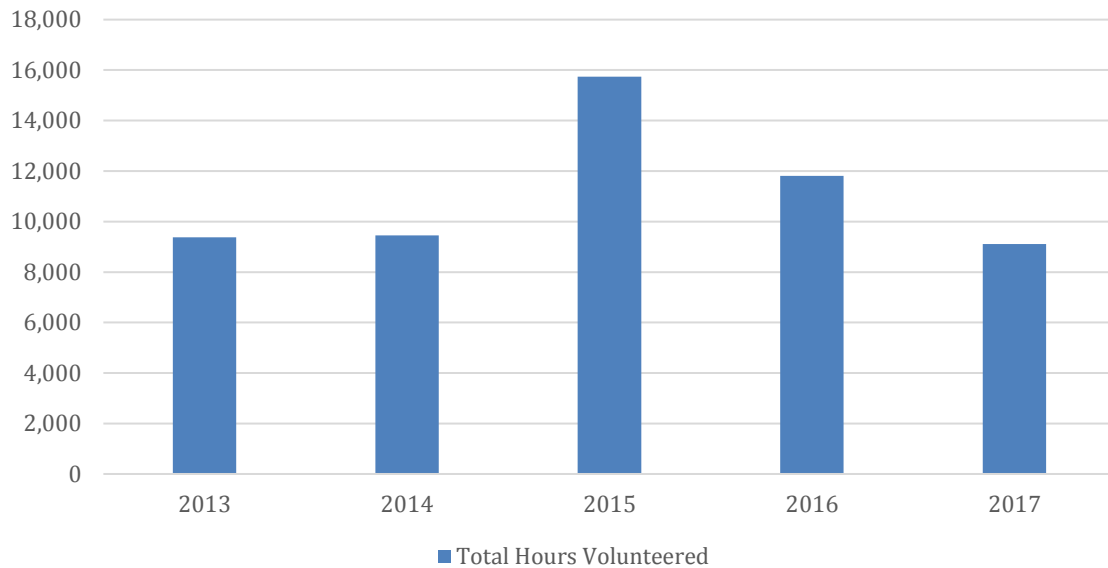
³ During this FY RM lost one term position due to NPS hiring restrictions. This position was picked up as a seasonal in the division.

⁴ Through the FY the Maint Div had a vacant chief position.

⁵ The VRP division has been without a pilot for 2 – 3 years. Operation has been covered in other than a NPS employee.

⁶ These numbers do not reflect actual seasonal positions filled, but rather number of seasonal positions planned for.

Total Hours Volunteered



Volunteer Program					
Year	Total Volunteers*	Total Hours	FT Equivilant	Program Expenses	Total In-kind
2017	88	9,112	4.3	\$6,748	\$219,969
2016	117	11,811	5.7	\$9,370	\$285,127
2015	127	15,743	7.6	\$8,150	\$380,048
2014	117	9,456	4.5	\$8,500	\$228,268
2013	92	9,377	4.5	\$6,325	\$226,355

* Further analysis needs to be done on this data. A large number of volunteers may only volunteer for a few hours a week or for a specific one-time project. The park brings on few "full time" volunteers.






Payment in Lieu of Taxes			
Koochiching County		Year	Amount
Agency	Acres	2017	\$11,739
BLM	73	2016	\$12,246
US FS	227	2015	\$12,166
NPS	3,741	2014	\$12,334
Total	4,041	2013	\$11,582
St. Louis County		Year	Amount
Agency	Acres	2017	\$315,515
BLM	549	2016	\$336,883
US FS	755,739	2015	\$306,881
NPS	94,210	2014	\$306,800
Total	850,504	2013	\$281,113











Natural Resource Condition Assessment (NRCA)

The following information is taken from the NPS' NRCA report related to Voyageurs National Park. The report was completed in 2015 by the NPS Natural Resource Stewardship and Science office.

The report states, *"This Natural Resource Condition Assessment was undertaken to evaluate current conditions for a subset of natural resources and resource indicators in VOYA. Using a framework developed by the Science Advisory Board of the United States Environmental Protection Agency, natural resources were evaluated in six categories: natural disturbance regimes, landscape condition, biotic condition, chemical and physical characteristics, ecological processes, and hydrology and geomorphology. A total of 39 resources and indicators were evaluated (shown below) by reviewing existing data from peer-reviewed literature and state and federal agencies, including NPS."*

You can view the full report at - <https://irma.nps.gov/DataStore/DownloadFile/52743>

	Condition good, improving trend	High	Water quality – dissolved oxygen – large lakes
	Condition good, stable trend	High	Land cover change Road density Fish communities Water quality – pH , dissolved oxygen, total nitrogen, total phosphorus, water clarity, chlorophyll a – interior index lakes Water quality – water clarity – large lakes
	Condition good, stable trend	Moderate	Impervious surfaces Zoobenthic community
	Condition good, uncertain trend	High	Water quality – pH – large lakes Water quality – chloride – interior index lakes
	Condition good, uncertain trend	Moderate	Lightscape Terrestrial exotic plants

	Condition of moderate concern, improving trend	High	Water quality – chlorophyll a – large lakes
	Condition of moderate concern, stable trend	High	Air quality – ozone Air quality – visibility Water quality – total phosphorus – large lakes
	Condition of moderate concern, stable trend	Moderate	Vegetation structure and composition
	Condition of moderate concern, uncertain trend	High	Water quality – alkalinity – large lakes
	Condition of moderate concern, uncertain trend	Moderate	Forest density Earthworms
	Condition of significant concern, improving trend	High	Mercury in precipitation
	Condition of significant concern, stable trend	High	Air quality – overall Air quality – wet deposition of nitrogen Air quality – wet deposition of sulfur
	Condition of significant concern, stable trend	Moderate	Moose (short term) Aquatic invasive species
	Condition of significant concern, uncertain trend	High	Mercury in fish tissue (effects on fish) Water quality – alkalinity – interior index lakes
	Condition of significant concern, deteriorating trend	Moderate	Zooplankton community

NPS Great Lakes Inventory and Monitoring Network (GLKN)

For further understanding of the park's overall condition VOYA staff work closely with staff from (GLKN). The VOYA NP website states, *"The Inventory and Monitoring Program is part of the National Park Service's effort to improve park management through greater reliance on scientific knowledge. The Great Lakes Inventory and Monitoring Network is one of 32 I&M Networks across the United States. Network biologists work with park managers and others to implement long-term monitoring programs that individual park resource managers cannot undertake because of limited time, money, or staff."*

Contaminants

Identify parks and water bodies where concentrations of mercury, lead, and persistent organic contaminants may be high enough to adversely affect fish and wildlife.

Assess patterns of methylmercury (MeHg) contamination in aquatic food webs.

Prey fish (one-year-old perch), predator fish (northern pike), larval dragonflies, zooplankton, water, and sediment are collected from Brown, Peary, Ryan, and Sand Point lakes.

Forest Vegetation

Collect data on trees, saplings, shrubs, ground layer, and coarse woody material.

38 plots scattered across the park, encompassing 11 forest types and four general habitats based on soil moisture and nutrients.

Plots are visited once every nine years.

Songbirds

80 points across the park are visited once a year during the month of June.

Determine species trends, make data available for comparisons, describe important habitats and how birds are using them, and use the data to help in talking about birds with neighbors, visitors and staff.

Landscape Dynamics

Disturbance (fire, wind storm, flood, insect or disease outbreaks) is an important part of how the boreal ecosystem functions at the southern edge of its range.

Human-caused disturbances (development, road-building, logging) also affects ecosystem function. Even disturbances outside the park can affect the park.

Monitoring these disturbances shows us how the land has changed through time.

Water Quality

The protocol for monitoring water quality of inland lakes encompasses the following vital signs:

Core suite (temperature, dissolved oxygen, conductivity, pH, water clarity)

Water level

Advanced suite (alkalinity, dissolved organic carbon, silica, chloride sulfate, calcium, sodium, potassium, magnesium, chlorophyll-a, total phosphorus, total nitrogen, ammonium-nitrogen, nitrate+nitrite-nitrogen)

Primary productivity (as estimated by chlorophyll-a measurements)

Nutrient dynamics (as measured by the phosphorus and nitrogen species)

The Network also monitors diatoms (a class of algae that have cell walls made of silica) in lake bottom sediments approximately every five years. Diatom monitoring aids in the interpretation of water quality results and because particular diatom species only exist under certain conditions, can be used to infer historic changes in water quality.

Data are collected monthly during the open-water months from Locator, Shoepack, Ek, Brown, Peary, Cruiser, Ryan and Little Trout lakes.